

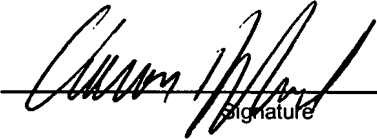
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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional)	
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	First Named Inventor Guojun DAI		
	Art Unit 3663	Examiner Eric BOLDA	
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.</p> <p><input checked="" type="checkbox"/> attorney or agent of record. Registration number 47,885.</p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>			
<p> _____ Signature</p> <p>Aaron M. Raphael _____ Typed or printed name</p> <p>(202) 408-4152 _____ Telephone number</p> <p>July 9, 2007 _____ Date</p>			

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Guojun DAI et al.)
Application No.: 10/522,246) Group Art Unit: 3663
Filed: August 5, 2005) Examiner: Eric BOLDA
PCT Filed: July 26, 2002)
For: OPTICAL FIBER FOR RAMAN AMPLIFICATION) Confirmation No.: 8809

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Sir:

PRE-APPEAL BRIEF REQUEST FOR REVIEW

In reply to the Final Office Action dated January 30, 2007, Applicants respectfully request panel review of the outstanding rejection under 35 U.S.C. § 103(a) identified in the Remarks below. This Request is being filed in conjunction with a Notice of Appeal under 37 C.F.R. § 41.31.

Rejection Under 35 U.S.C. § 103(a)

In the Final Office Action, the Examiner rejected claims 29-31 and 34-43 under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. 6,194,334 to Aitken et al. in view of U.S. 6,771,414 to Masuda. The Examiner's position is that Aitken discloses a tellurite glass having a composition of 10-90% tellurite, at least 5% WO₃, and 0-30% of a modifying oxide of Nb. Final Office Action at 4. The Examiner concludes that it would have been obvious to one skilled in the art "to produce the glass composition of Aitken, in the optical fiber and Raman amplifier of Masuda, for the purpose of broadening the amplifier spectrum." *Id.* at 5. Applicants disagree.

Several basic factual inquiries must be made in order to determine whether or not claims are obviousness under 35 U.S.C. § 103. These factual inquiries, set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459, 467 (1966), require the Examiner to:

- (1) Determine the scope and content of the prior art;
- (2) Ascertain the differences between the prior art and the claims in issue;
- (3) Resolve the level of ordinary skill in the pertinent art; and
- (4) Evaluate evidence of secondary considerations.

The obviousness or nonobviousness of the claimed invention is then evaluated in view of the results of these inquiries. *Graham*, 383 U.S. at 17-18, 148 U.S.P.Q. 467.

Thus, in order to carry the initial burden to establish a *prima facie* case of obviousness that satisfies the *Graham* standard, the Examiner must at least show (1) that the prior art reference teaches or suggests all the claim limitations, (2) that there is some suggestion or motivation, either in the reference or in the knowledge generally available to one skilled in the art, to modify the reference, and (3) that there is some reasonable expectation of success. *See* MPEP § 2143. The Supreme Court, in the recent *KSR Int'l Co. v. Teleflex, Inc.* case, recognized that a showing of “teaching, suggestion, or motivation” could provide helpful insight in determining whether the claimed subject matter is obvious under § 103(a). 127 S. Ct. 1727, 1740-41, 82 U.S.P.Q.2d 1385, 1396 (2007).

In the instant case, the Examiner has not and cannot establish a *prima facie* case of obviousness because (1) Aitken does not teach the glass composition of the claims; and (2) there is no motivation to use the glass composition of Aitken in the Raman Amplifier of Masuda.

A. No Motivation to Select the Glass of Claims

Aitken does not specifically disclose a tellurite glass composition comprising 10-90% tellurite, at least 5% WO₃, and 0-30% of a modifying oxide of Nb, as the Examiner alleges. Rather, Aitken teaches a family of glasses that “consist essentially of . . . 10-90% TeO₂, at least 5% WO₃, and at least 5% R₂O” Aitken, col. 2:40-44. Aitken further teaches that the glass composition may be modified “to alter the physical properties of glasses” (*id.*, col. 4:45-46) with a large number of modifying oxides, including “0-30% MO where M is Mg, Ca, Sr, Ba, Zn, Cd, Pb, Y, La, Gd, Lu, Ti, Zr, Hf, Nb, Ta, Bi, H, B and/or P.” *Id.*, col. 4:54-56.

There is no motivation to make the various, necessary selections to modify the teachings of Aitken to reach the claimed optical fiber composition. There is no teaching or suggestion as to why one skilled in the art would modify the glass composition of Aitken with one of the modifying oxides, in particular Nb. As MPEP § 2143.01 teaches, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” (Emphasis in original).

The Examiner has responded that “although the general family of glasses disclosed does not list Nb, . . . col. 4:45-46 . . . [Aitken] does list Nb in addition to other possible modifying oxides.” Final Office Action at 2 (emphasis in original). Thus, according to the Examiner, “no modification of Aitken is needed to achieve the recited *glass composition*.” *Id.* (emphasis in original). The Examiner also refers to MPEP § 2144.05, noting that “where claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists.” *Id.*; *see also* Advisory Action at 2.

The mere fact that the ranges may overlap, however, does not necessarily establish a *prima facie* case of obviousness. *See* MPEP § 2144.08(II) (“The fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a *prima facie* case of obviousness.”). MPEP § 2144.05(I), upon which the Examiner relies, states that “if the reference’s disclosed range is so broad as to encompass a very large number of possible distinct compositions, this might present a situation analogous to the obviousness of a species when the prior art broadly discloses a genus.” MPEP § 2144.08(II) further instructs that the “patentability of a claim to a specific compound or subgenus embraced by a prior art genus should be analyzed no differently than any other claim for purposes of 35 U.S.C. 103.” Thus, the Examiner must first “find some motivation or suggestion to make the claimed invention in light of the prior art teachings.” MPEP § 2144.08(II)(A).

The Examiner’s conclusory argument that “the rejection was a combination of the Raman amplifier of Masuda and any of the tellurite glass compositions of Aitken” and “[o]nce this is

motivated, no motivation is needed to further select a species taught by Aitken” (Advisory Action at 2) falls far short of what is required. The mere fact that two references can be combined (and Applicants do not concede this point, as discussed below) does not mean the Examiner may abdicate his duty to identify a motivation to identify and select each of the claim limitations, i.e., the use of Nb.

Any argument that the size of the modifying oxide genus of Aitken creates a *per se* conclusion of obviousness is again not the proper inquiry; rather, “[s]ome motivation to select the claimed species or subgenus must be taught by the prior art.” MPEP § 2144.08(II)(A)(4)(a) (citations omitted). The Examiner has not offered any explanation why there would be any reasonable expectation of success to modify with an oxide of Nb in view of the large list, considering the unpredictable nature of the art.

Nevertheless, Applicants’ specification establishes the criticality of using Nb in an amount greater than 5%. For example, Table 2 shows unexpectedly superior thermal stability results for composition TNW versus TW10, wherein the difference is the presence of 18% of a Nb oxide compound in TNW. Specifically, TW10 merely has a thermal stability index value of 99 versus 175 for TNW. In fact, the TNW composition exceeds the results of any of the compositions with just two oxide compounds of the claims. Similarly unexpected results are reported for TNT versus TN10.

The Examiner dismisses the argument because Table 2 of the specification “shows several other glass compositions with similar superior thermal stability, so there appears [to be] nothing critical about the claimed composition.” Advisory Action at 2. The Examiner, however, has misconstrued the data. Table 2 shows that the addition of a third oxide, whether Nb, Wo, or Ti, provides unexpectedly superior results when compared to the appropriate set of binary compositions.

B. No Motivation to Combine Aitken and Masuda

The Examiner has argued that “the glass of Aitken, being a type of tellurite glass, would be an obvious candidate to try as the amplifying fiber in the Raman amplifier system of Masuda.” Final Office Action at 3. Applicants respectfully disagree.

First, the Examiner has pointed to no evidence that adding Nb to Aitken's tellurite glass would "broaden[] the amplifier spectrum." Final Office Action at 5. In fact, Aitken merely states that the modifying oxides, including Nb, "alter the physical properties" of the base glass compositions and the only optical property that can be different is refractive index. Aitken, col. 4:45-52. Thus, one skilled in the art would expect that modifying the base composition by adding Nb would not change the optical property, broadening the amplifier spectrum.

Second, while Masuda discloses using tellurite glass as the gain medium, one skilled in the art would not have been motivated to use the specific glass composition of Aitken, let alone the claimed composition containing Nb. Indeed, Masuda defines the glasses available for use with its invention: $\text{TeO}_2\text{-ZnO-M}_2\text{O-L}_2\text{O}_3$ or $\text{TeO}_2\text{-ZnO-M}_2\text{O-L}_2\text{O}_3\text{-QO}_2$, wherein M, L, and Q are expressly limited in scope. Masuda, col. 6:1-6. In view of the fact that Aitken requires a minimum of 5% WO_3 , that Aitken is prior art to Masuda, and Masada does not apply to tellurite glass compositions with WO_3 , a person of ordinary skill in the art would recognize that Masuda does not believe the glass compositions of Aitken are suitable. Thus, there can be no motivation to combine.

Accordingly, for at least the foregoing reasons, Applicants respectfully request that this rejection be withdrawn. Please grant any extensions of time required to enter this paper and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: July 9, 2007

By: 

Aaron M. Raphael
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